Telecommunications.

Quote by: **http://en.wikipedia.org/wiki/Telecommunications_engineering**

Telecommunications engineering, or telecom engineering, is an engineering discipline that brings together electrical engineering with computer science to enhance telecommunication systems.[1][2] The work ranges from basic circuit design to strategic mass developments. A telecommunication engineer is responsible for designing and overseeing the installation of telecommunications equipment and facilities, such as complex electronic switching systems, copper wire telephone facilities, and fiber optics. Telecommunication engineering also overlaps heavily with broadcast engineering.

Telecommunication is a diverse field of engineering which is connected to electronics, civil, structural, and electrical engineering. Ultimately, telecom engineers are responsible for providing the method for customers to have telephone and high-speed data services. It helps people who are closely working in political and social fields, as well accounting and project management.

Telecom engineers use a variety of equipment and transport media available from a multitude of manufacturers to design the telecom network infrastructure. The most common media used by wired telecommunications companies today are copper wires, coaxial cable, and fiber optics. Telecommunications engineers use their technical expertise to also provide a range ofservices and engineering solutions revolving around wireless mode of communication and other information transfer, such as wireless telephony services, radio and satellite communications, internet and broadband technologies.[3]

Telecom engineers are often expected, as most engineers are, to provide the best solution possible for the lowest cost to the company. Most of the work is carried out on a project basis with tight deadlines and well-defined milestones for the delivery of project objectives. Telecommunication engineers are involved across all aspects of service delivery, from carrying out feasibility exercises and determining connectivity to preparing detailed, technical and operational documentation.[3] This often leads to creative solutions to problems that often would have been designed differently without the budget constraints dictated by modern society. In the earlier days of the telecom industry, massive amounts of cable were placed that were never used or have been replaced by modern technology such as fiber optic cable and digital multiplexing techniques.[4]

Telecom engineers are also responsible for overseeing the companies' records of equipment and facility assets. Their work directly impacts assigning appropriate accounting codes for taxes and maintenance purposes, budgeting and overseeing projects.

So, the telecommunications industry is all about circuits and delivering the circuits signal to other areas of the countryor world. of course, with the advent of vector communications, it makes the wiring mush easier when it comes communicating over a large area, but, that isn't everything.

So, how do we make a circuit for the telecoms? if it were actually just a switch where things get set from off to on, through the transistors, then this is basic binary, if you ask me. it works at a decent pace, but, recently i found that they get very soft and dulled out over a long area, so how do we get the volume to sit right?

I would say that the more switches it goes through, the more dulled it becomes, so, we are looking for a way to limit the amount of switching over that happens. this means that we need to get the switching down a lot! we could do this by using 'numeric transistors' that dial numbers themselves, and that would be better than binary, no?

Electromechanics.

Quote by: **http://en.wikipedia.org/wiki/Electromechanical**

> *In engineering, electromechanics[1][2] combines electrical and mechanical processes and procedures drawn from electrical engineering and mechanical engineering. Electrical engineering in this context also encompasses electronics engineering.*
>
> *Devices which carry out electrical operations by using moving parts are known as electromechanical. Strictly speaking, a manually operated switch is an electromechanical component, but the term is usually understood to refer to devices such as relays, which allow a voltage or current to control other, isolated voltages and currents by mechanically switching sets of contacts, solenoids, by which a voltage can actuate a moving linkage, vibrators, which convert DC to AC with vibrating sets of contacts, etc.*
>
> *Before the development of modern electronics, electromechanical devices were widely used in complicated systems subsystems, including electric typewriters, teletypes, very early television systems, and the very early electromechanical digital computers.*

So, this is all about making things move. if there is a current, and the current goes over a certain point, the thing moves. this is very simple isn't it? i think that is the basics.

I think to make it better, we should be able to skip certain points or get them all to work together, or, set up a relay, like the quote says. this would mean that the circuits are set up to make the next one work when it is filled with electricity, or, enough electricity goes through the circuit, of course.

Now, to make it cheaper, they should not use electricity! they should use leverage, like was used to build the pyramids. if they wee to use energy coming from a manual thing, where someone pushes a oscillator or something, they could use that energy to make the relay move and complete it's task.

Then again, maybe it is possible to make the whole factory electricity free - all we need to do now is make the lights come on without the help of electricity. this could be done with neon lighting the likes of which glows purple or green or yellow or other things in the dark?

Solenoid.

Quote by: **http://en.wikipedia.org/wiki/Solenoid**

> *A solenoid (from the French solénoïde, derived in turn from the Greek solen "pipe, channel" + combining form of Greek eidos "form, shape"[1]) is a coil wound into a tightly packed helix. The term was invented by French physicist André-Marie Ampère to designate a helical coil.[2]*
>
> *In physics, the term refers specifically to a long, thin loop of wire, often wrapped around a metallic core, which produces a uniform magnetic field in a volume of space (where some experiment might be carried out) when an electric current is passed through it. A solenoid is a type of electromagnet when the purpose is to generate a controlled magnetic field. If the purpose of the solenoid is instead to dampen changes in the electric current, a solenoid can be more specifically classified as an inductor rather than an electromagnet. Not all electromagnets and inductors are solenoids; for example, the first electromagnet, invented in 1824, had a horseshoe rather than a cylindrical solenoid shape.*
>
> *In engineering, the term may also refer to a variety of transducer devices that convert energy into linear motion. The term is also often used to refer to a solenoid valve, which is an integrated device containing an electromechanical solenoid which actuates either a pneumatic or hydraulic valve, or a solenoid switch, which is a specific type of relay that internally uses*

an electromechanical solenoid to operate an electrical switch; for example, an automobile starter solenoid, or a linear solenoid, which is an electromechanical solenoid.

This is all to do with electromagnetism. if the solenoid carries the electricity or electrons in a field, they can generate other signals off the circuit, so it is like a laser, you could say, i think.

If you were to think about it, it could be a lot more efficient if the signals did not interfere with each other, i am not surewhat the status is right now, but i am sure that it would be an improvement.

So, we want to work with orbital clouds. they say, if i remember correctly, that thing with similar amount of electrons are attracted to each other. this means we need to find a mix of either all different cloud values, or all the same, i am not sure which though.

To make all the orbital clouds of the atoms similar, we need to emit just with one frequency, and i am sure that is what they do now, holding the signal together, or...

They could make them all different amounts of orbitals per area to get a clearer picture on a television, if you were to look at it like i do, but i am not saying it is even used for television, but the signal will be clearer. the problem is, the receiver will get different signals and need to decode each one differently. of course, this could be sped up by hard wiring the whole circuit with different receiver types, which would take a little time in the workshop, and pay dividends with the end product.

Modulation.

Quote by: **http://en.wikipedia.org/wiki/Modulation**

In electronics and telecommunications, modulation is the process of varying one or more properties of a periodic waveform, called the carrier signal (high frequency signal), with a modulating signal that typically contains information to be transmitted.

In telecommunications, modulation is the process of conveying a message signal, for example a digital bit stream or an analog audio signal, inside another signal that can be physically transmitted. Modulation of a sine waveform transforms a baseband message signal into a passband signal.

A modulator is a device that performs modulation. A demodulator (sometimes detector or demod) is a device that performs demodulation, the inverse of modulation. A modem (from modulator–demodulator) can perform both operations.

The aim of digital modulation is to transfer a digital bit stream over an analog bandpass channel, for example over the public switched telephone network (where a bandpass filter limits the frequency range to 300–3400 Hz), or over a limited radio frequency band.

The aim of analog modulation is to transfer an analog baseband (or lowpass) signal, for example an audio signal or TV signal, over an analog bandpass channel at a different frequency, for example over a limited radio frequency band or a cable TVnetwork channel.

Analog and digital modulation facilitate frequency division multiplexing (FDM), where several low pass information signals are transferred simultaneously over the same shared physical medium, using separate passband channels (several different carrier frequencies).

The aim of digital baseband modulation methods, also known as line coding, is to transfer a *digital bit stream over a baseband channel, typically a non-filtered copper wire such as a serial bus or a wired local area network.*

The aim of pulse modulation methods is to transfer a narrowband analog signal, for example a phone call over a wideband baseband channel or, in some of the schemes, as a bit stream over another digital transmission system.

In music synthesizers, modulation may be used to synthesise waveforms with an extensive overtone spectrum using a small number of oscillators. In this case the carrier frequency is typically in the same order or much lower than the modulating waveform. See for example frequency modulation synthesis or ring modulation synthesis.

This uses binary! binary is a curse! we must improve it or die trying. of course, this could be quite easy, or hard... let's find out!

So, the message is put into the system, converted to binary, sent to the target, and demodulated into characters or voice or signals again. this could be made easier without modulating and demodulating, so, i suggest first, for telecoms, they carry a direct character set. after all, the signal is made on one side and received on the other, we just got to cut out the modulation and demodulation, no?

If the signal is sent straight to the target then there will be no problem. this reminds me of the first telephones - cups and string. the trick is, to get the signal across, it must carry the signal unaltered. this means that we need to set wires instead of transistors into the telecoms, a few wires that are connected by 'numbers.' if you were to dial the phone, and the wires were tapped to the phone numbers, they would connect in a certain way, connect to the telephone line, and then send the connection to the target which also has a 'code.' This would work the same for modems, i suppose, and it is nearly an analogue signal, so will be clearer.

Problems in south africa - black heath.

Quote by: **http://www.sabreakingnews.co.za/2014/06/09/sanral-must-legally-relocate-lwandle-evictees-de-lille/**

Cape Town Mayor Patricia De Lille has written to Human Settlements Minister Lindiwe Sisulu requesting a meeting withdepartment agencies and road agency Sanral after reports that over 800 evicted citizens were being bussed to alternative land in Blackheath on Monday.

De Lille said Sanral would have to go through the necessary legal processes before it could relocate the residents who were forcibly removed from Sanral owned land in Lwandle, near Strand, last week.

“In this particular instance, there would be a need for rezoning approval and for an environmental assessment,” she said.

“Included within these processes would be the related requirement for some form of public participation.”

De Lille added that the city would provide evictees with emergency housing kits once the necessary legal obligations had been fulfilled.

“If these processes are ignored, then it is only likely that a new set of problems will be created in relation to this matter and the rights of all those involved will be undermined.”

Meanwhile, Blackheath residents objected to the relocation of Lwandle residents to the area

> *saying that its own community is in need of land.*
>
> *“We have people staying in backyards, unemployed people and people sleeping on stoops,” one Blackheath resident told Eyewitness News.*
>
> *According to the publication, the Ses’khona Peoples Rights Movement said it is ready to sue the City Of Cape Town and Sanral for the eviction of the community in the middle of winter.*
>
> *“It is not only a matter of evictions. This is a serious human rights violation,” said the leader of the organisation, Loyiso Nkohla.*
>
> *Nkohla added that the movement will also lodge cases of alleged police brutality against South African Police Service officials for their part in the evictions.*

So, the problem is where to stay, police brutality, and where the houses are supposed to come from.

If we were to relocate the squatters, they would still need houses. they have no jobs to pay for houses, so it needs to be for free. i suggest that they all be moved into the city and given a few empty building to live in - the city could buy these toxic assets for a very small price and would avoid the police brutality charges if an agreement is met. these buildings could be owned by the city, but, will house these people in the mean time?

Building schools and funding them.

It was on the radio tonight that there are not enough schools, or they need to be finished being built soon so that the school can move. if there is a problem with the school being finished, there are rights to education, so, the city should get involved, but, i am not sure where this school will be or where they are, but know it is somewhere in south africa or cape town or something.

> Quote by: **http://hsf.org.za/resource-centre/hsf-briefs/the-right-to-basic-education**
> *It is widely accepted that education plays a vital role in lifting people out of poverty, empowering women and children, and promoting human rights and democracy. This brief aims to define the right to basic education in South Africa*

So, seeing as how everybody has a right to education in south africa, maybe they could make it easier or more accessible by teaching people to read and right with flash cards that can be sent to cell phones? if the people got that, then they would know how to read, write and count with the characters of a cell phone, as many jobs require computer skills today. if they even don't get to a computer, they will still be able to read for job vacancies in the news.

Of course, this does not solve the problem of building schools for young children. if the people were allowed to a school - those that have not been given a chance - they could do it out of prefabs, as those are cheap and mobile, so, for the same price as building one school, you could have twenty schools, i think.